

## ABSTRACT

Disclosed is a fluid dispensing system for precisely controlling the mixing of a first fluid (i.e., a diluent such as water) with a second fluid (i.e., a concentrate) at a mixing point within the fluid dispensing system. A valve is positioned in the dispensing system along the line of supply of the second fluid upstream of the mixing point, such valve being simultaneously actuated through application of positive and/or negative pressure to allow the second fluid to flow through the valve. The application of positive and/or negative pressure is generated from the first fluid to be dispensed by the system and mixed with the second, such that the termination of flow of the first fluid immediately terminates flow of the second fluid to ensure proper mixing of the two fluids in the final solution, thus preventing inadvertent leakage of the second fluid or collection of the second fluid within the flow system which may become subject to spoilage or contamination.

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